“The courage to act.”
An Interview with Dr.-Ing. Christina Reuter, Airbus Defence and Space and Supervisory Board Member of KION Group AG
Gas-Heiztechnik der neuesten Generation

Das neue Gas-Brennwert-Wandgerät Vitodens 200-W – ideal für die Eigentumswohnung oder das Einfamilienhaus.


viessmann.de/vitodens
research networks are in tackling global challenges. The rapidly growing number of people who have been vaccinated gives us hope that we will soon get back to a somewhat “normal” life. This is why I am optimistic about this semester, and am sure that we will once again be carrying out many pioneering projects, either in person or digitally.

The topic of sustainability, for example, is a university-wide project at RWTH. In future, we will contribute more to this in the fields of teaching, research, business, governance, and transfer, so that we can call for and support more sustainable development in our society. To do so, we are organizing university-wide workshops, developing a motivating mission statement, and attempting to make all levels of the University aware of this responsibility.

I hope you enjoy reading this exciting and informative magazine! Stay safe, optimistic and keep in touch. I look forward to seeing you again in person.

Best wishes from Aachen,

Univ.-Prof. Dr. rer. nat. Dr. h. c. mult. Ulrich Rüdiger
Contents

Is the Science System Ready for the Future?
RWTH Enjoys An Exciting Science Evening on the Future Development of Universities ......................... 6

Anniversary Exhibition will Open in October ................................................................. 9

Digital RWTH Alumni Day ...................................................................................... 9

Agility as a Key Factor for Success –
Online Discussion Between Alumnus Harald Krüger
And Doctoral Students of the RWTH Profile Areas .................................................. 10

The Future of Innovation –
Online Opening Speech for the Alumni Network ..................................................... 12

Between Digitalization and Face-to-Face Learning –
First Virtual Meeting of American Alumni ............................................................. 13

Sponsors Wanted! –
Take Part and Get Involved in the RWTH Education Fund! .................................. 14

20 Years of the INCAS Student Organization –
Request for Video Messages From Former Members and Friends ....................... 15

10 Years After the End of the Malteserkeller –
A Look at a Former Institution of University Life in Aachen .............................. 16

short & compact ............................................................................................................ 19
Alumni Up Close and Personal

“The courage to act.“
An Interview with Dr.-Ing. Christina Reuter,
Airbus Defence and Space and Supervisory
Board Member of KION Group AG ......................20

From Further Mathematics to Major Strategic Issues –
RWTH Alumnus Oliver Kohlhaas from Bayer AG is
at a Central Interface for the Future of the Company .......................................................25

Science & Industry

Proactive, Goal-Directed, Creative, Clear, and Consistent –
Reflected Decision-Making Using an Internet Tool: The DECISION NAVIGATOR .... 28

Sunny Prospects –
Two Young RWTH Graduates Establish Photovoltaic Technology in Albania................33

ENHANCE – A Joint Campus for Europe
RWTH Aachen University Is Now Part of the “European Universities”
of the EU Commission ........................................................................................................36

proRWTH! We Promote Diversity –
Two Examples of Student Visions and Creativity.................................................................38

Life in Aachen

The Search for a Unique Experience –
The New MERIAN Scout Shows the Innovative, Lively and Euregional side of Aachen ..........41
Is the Science System Ready for the Future?

RWTH Enjoys An Exciting Science Evening on the Future Development of Universities.
Universities all over the world endeavor to constantly face new challenges. But is the historically evolved higher education system so well positioned that it can meet this demand in the short time required? And what does society expect from universities in this regard? This initial situation motivated RWTH to invite guests to the hybrid science evening at the Permanent Representation of the German State of North Rhine-Westphalia in Berlin under the title “The New Fiction of Good Science – in Need of a Paradigm Shift?!”.

With the participation of German Chancellor Angela Merkel and NRW Minister-President Armin Laschet, patron of the event, the focus in May 2021 was on the innovative capacity and robustness of universities such as RWTH, but also of the science system as a whole. “RWTH excels in putting what is learned and researched into practice. In its search for answers, RWTH always stays on top of the times, if not even one or two steps ahead,” explained Chancellor Merkel, who joined the event by video.

The pandemic has confronted universities with a new normal. This was made clear by Anant Agarwal, founder and CEO of edX and Professor of Electrical Engineering and Computer Science at the Massachusetts Institute of Technology (MIT), in his keynote address “The New Normal in Education”. This new normal is based on the digitalization of teaching. The technology had long been there, but it wasn’t until the COVID-19 pandemic that its widespread use was triggered by force. Universities were mostly able to react well to the situation. The question is, however: How will it all continue after the COVID-19 pandemic? For Anant Agarwal, the new normal is a flexible mix of online offerings and face-to-face learning.

The now established online learning system is the biggest revolution in education that has happened in a very long time, he said. And it is good for society, he says, because it allows for much more individualized, flexible learning opportunities – for everyone, anywhere in the world. Agarwal’s approach is to offer so-called MicroBachelor’s programs, certificates from which people from all over the world could put together their own individualized degree programs at universities all over the world – completely modular.
For Agarwal it’s always fun to dream about what the future will look like at our universities. The most important question for him is this: What systems can be created for learners to provide each of them individually with the best possible offers?

Lynda Gratton, Professor of Management Practice at London Business School, went one step further: She wants to fundamentally rethink teaching – not only in virtual formats, but also in structural terms. She caused a bit of a stir with the audience with her remarks. “Is she roasting the whole education system?” was asked in the chat in which a discussion arose about good and bad teaching while the London professor and author of “The New Long Life”, spoke on the topic of “University 4.0: Teaching and Learning in the Era of the Fourth Industrial Revolution”.

Gratton outlined the change required in her view, away from a three-stage life model of full-time education, work, and then retirement. “We can no longer pack all our education into one phase of our lives!” she stressed. Besides, it hardly makes sense to learn what machines and artificial intelligence can already accomplish now and in the future. However, repetitive learning is still a significant part of young people’s education at universities, she said. Gratton calls for a new focus: In her view, the crucial skills are creativity and social skills. These should be developed much more than before. And there should be more opportunities for creative people to meet. For Professor Gratton, the essential question is this: “How do we design new learning experiences that allow creative people to encounter others they’ve never met before?”

Digitization alone does not lead to sufficient improvements

To what extent or what quality of digitization is necessary and efficient was the focus of the section “University 4.0: Teaching and Learning in the Era of the Fourth Industrial Revolution” from many perspectives. Moderated by Prasanna Oommen, the discussion between Professor Simone Buitendijk, Vice-Chancellor of the University of Leeds, England, Professor Anna Karlsson-Bengtsson, Vice-President of Chalmers University of Technology, Sweden, Professor Andreas Barner, President of Stifterverband, and Raphael Kiesel, a doctoral candidate in Aachen, made it clear that digitization alone does not lead to sufficient improvements in teaching.

Dr. Anne Schreiter, Managing Director of the German Scholars Organization and RWTH Vice-Rector Malte Brettel discussed the topic “University Mission (Impossible?): From Role Model to Supermodel” with Dr. Georg Schütte, Secretary General of the Volkswagen Foundation, Dr. Wolfgang Rohe, Chairman of the Management Board of Stiftung Mercator, Professor Rianne Letschert, Rector of Maastricht University, Professor Thomas Girst, Head of Cultural Management BMW Group, and Stefan Hilterhaus, Artistic Director of PACT Zollverein. The panelists focused on the demands that are being made on universities today and in the future, including from outside the institutions.

Whether the framework conditions can enable such expectations to be fulfilled was discussed in the “Deep Tech, High Touch: The New University Innovation Eco-system” round. Anne Schreiter and RWTH Professor Frank Piller welcomed Deutsche Bahn Board Member for Digitalization and Technology Professor Sabina Jeschke, Science Senator for Hamburg Katharina Fegebank, founder of “zukunft zwei” Carolin Silbernagl, founder and RWTH Professor Günther Schuh, and BMBF State Secretary Thomas Rachel. The fact that universities, more than almost any other institution, can sufficiently network with each other all around the world in order to jointly master global change was a central result of the evening. And the ideas from this exchange are now to be explored in more depth: “The New Fiction of Good Science – Talking About...” will continue as an event series. The dates will be published soon. The next event will focus on the topic of innovation and sustainability.

Thorsten Karbach

YouTube live stream: “The New Fiction of Good Science – In Need of a Paradigm Shift?!”
Between October 30, 2021 and February 22, 2022, Centre Charlemagne will offer many insights into the history of RWTH.

**Anniversary Exhibition will Open in October**

The joint anniversary exhibition of RWTH Aachen University and the City of Aachen at Centre Charlemagne from October 30, 2021 to February 22, 2022 will provide fascinating insights into the history and development of the University, founded on October 10, 1870 as the Royal Rhenish-Westphalian Polytechnic School, and offers visitors the opportunity to discover research highlights and the focus areas of all relevant fields from the past 150 years. Originally planned to run in the 2020 anniversary year, the exhibition had to be postponed due to the coronavirus pandemic. The vernissage will now be held on October 29, 2021.

**Digital RWTH Alumni Day**

Originally, RWTH wanted to invite its alumni last year to celebrate 150 years of RWTH by taking an exclusive look behind the scenes at Campus Melaten. It was to be a convivial open day with plenty of time to discover today’s University and current research projects, but also to share ideas and spend some time with other former fellow students. Due to the global pandemic, we had to forget about these plans in 2020 anniversary year. Such a big event on the rescheduled date of June 12, 2021 could also not be held under the circumstances. In order to still celebrate the 150th anniversary of the University together, we are inviting the RWTH alumni to a virtual experience world in the fall. On October 9, RWTH Rector Professor Dr. Ulrich Rüdiger will open the Digital Alumni Day and welcome the alumni via live stream. Afterward, the alumni and interested listeners can digitally discover research and innovation on Campus Melaten from home on the three themed routes: Energy & Mobility, Medical Technology, and Production Technology.

Besides these glimpses of what is happening on campus, we will also be offering our alumni the opportunity to take another in-depth look at their old faculty and take advantage of networking opportunities with alumni associations. After the opening, the faculties will be able to introduce and present themselves with digital presentation and networking opportunities each week. Last but not least, the alumni topic also provides many connections with central university areas, such as international affairs, career service, or entrepreneurship that are shown at the Digital Alumni Day.

The topic routes as well as many talks, presentations, and videos can be viewed online until February 22, 2022, the end of the RWTH Exhibition at Centre Charlemagne.

› Dietrich Hunold

Detailed information about the university anniversary: [www.rwth-aachen.de/150](http://www.rwth-aachen.de/150)
Agility as a Key Factor for Success
Online Discussion Between Alumnus Harald Krüger
And Doctoral Students of the RWTH Profile Areas

It was supposed to be a test run with a prestigious panel and, ideally, the start of a recurring lecture series: Harald Krüger, former Chairman of the Board of Management of the German DAX company BMW AG and current Supervisory Board Member of Deutsche Telekom AG, Deutsche Lufthansa AG and the EMEA Advisory Board of Salesforce, had taken the time to give a two-hour talk on May 11, 2021 as an alumnus of RWTH Aachen University. He had offered to share his experiences with those who are at the first phase of their career – the engineering doctoral students at RWTH Aachen University.

Harald Krüger, the Rector of RWTH Professor Ulrich Rüdiger, and speaker of the Profile Area Production Engineering, Professor Thomas Bergs, raised the particular question: Can an online format that includes hundreds of doctoral students, a keynote speech and a detailed discussion on the theses of Harald Krüger’s wide range of experiences be successful?

The event aimed to make more direct communication with the prominent speakers possible. It focused on talking with the doctoral students on an equal footing – it was about dialogue, and for the students to be able to take away valuable information from both the professional and, in part, personal background of Harald Krüger for their own upcoming decisions.

**Entrepreneurship, internationalization and leadership in the digital age**

There was cause for optimism from the very beginning of the event: “We initially considered advertising the event by sending a flyer to the Profile Area email distribution list,” says Dr. Sebastian Barth, Managing Director of the Profile Area Production Engineering, Senior Engineer at the Laboratory for Machine Tools and Production Engineering (WZL) of RWTH Aachen University, and the main organizer of the event. “We then wanted to advertise the event using wider public formats, such as social networks. But this proved to be unnecessary. Within 24 hours of sending out the flyer, all 100 spaces were booked.”

On May 11, with all available spaces taken, Harald Krüger followed the welcoming speech by the Speaker of the Profile Area Production Engineering and a brief introduction from the Rector with the topic “Agility as a Key Factor for Success” focusing on three key areas: Entrepreneurship, internationalization and leadership in the digital age.

Leadership – as a key, overarching topic for Harald Krüger, this is a matter of personal responsibility, closely intertwined with the courage to be decisive: “In everything you do, do not hesitate too much, make conscious decisions quickly, take responsibility for this, and if something goes wrong, learn from it! The secret to success is deciding and doing.”

“The secret to success is deciding and doing.”

In addition to an excellent education, young talents today should also strongly consider a stay abroad – keyword “internationalization”. Krüger says that managing employees from different cultures strengthens one’s own personality, particularly when misunderstandings that are difficult to avoid can be successfully resolved. Krüger associates the key word “entrepreneurship” with regard to the doctoral students with their particular connection options: “After finishing university and your doctorate, you will fortunately be spoiled for choice, now more than ever, and can start in almost any direction! This is why you should know your talents and your potential by then,” argues Krüger.

The speech was followed by a one-hour discussion round, in which students asked questions: Keyword “career development – how do I proceed as a young father.” Krüger’s response: “Plan you time carefully, including at weekends, and make time in your schedule for reflection. It is important to stick to the private and professional commitments you have made – and break them only if there is a real emergency.”

Keyword: “Electrification of the automotive industry – how do I deal with this development as a young engineer.” Krüger’s response: “Prepare for a disruptive and fundamental change”.

The digital format chosen for this evening undoubtedly does not always convey the magic of an exciting aura that usually makes prominent live meetings what they are. Nevertheless, the students were sending many new questions in the chat during the discussion with Harald Krüger.

**What was the impression of the students?**

But, of course, there is no empirical answer to the question of whether the intended test concept of a digital event with around one hundred doctoral students can ultimately be considered a success. So what do the organizers think looking back and what was the impression of the doctoral students who were asked to give their opinion in an internal survey?

“The doctoral students who participated gave us active and constructive feedback when asked. Everyone was delighted to be given an insight into the experience of a such a highly skilled alumnus,”
confirmed Professor Thomas Bergs and Dr. Sebastian Barth. “If these experiences can then be linked to topics that are current and relevant for the doctoral students’ futures, it is clear that everyone wants this to continue. We, as the organizers, would like to see this, as well.”

The Rector strongly agrees: “From our perspective, the event was a complete success,” says Professor Ulrich Rüdiger: “The exciting insights into such varied topics, such as digitalization, management, personal development, entrepreneurship, and internationality, but also the open discussions in particular, gave the doctoral candidates valuable insights into how the world of work is changing and enabled them to gain perspectives for their own career plans.”

An external perspective added to and rounded off this very positive viewpoint: “I laid the foundation for my professional career at RWTH,” says Harald Krüger: “I still look back fondly on my time at university and am delighted that I can pass on my wide range of experiences from an exciting working environment as valuable impulses to tomorrow’s generation. RWTH Aachen University has always been known for its excellent education and innovative future technology and we all make an important contribution to this.”

Whether and the extent to which the series will continue remains to be seen. As Goethe said, “attention is life.” And if the audience is to be believed, the two hours with Harald Krüger on May 11 were certainly not lacking in this valuable resource.

In fact, the aura of the former Dax Chairman of the Board and the content of his speech seemed to effortlessly come across the, at times, rather jumpy link of the digital video channel and straight into the private office, living room or bedroom of the RWTH doctoral students, who were watching and listening with curiosity before taking part in the discussion.

“Be prepared for a disruptive and fundamental change.”
The Future of Innovation
Online Opening Speech for the Alumni Network

The Future of Innovation: Elements of a new research & innovation system after the Pandemic – this is the first online RWTH alumni talk that 119 participants around the globe attended by video call on February 16. Is the corona pandemic really the catalyst for digitalization we all think it is? What effect does the pandemic have on a company’s ability to innovate? Will business models change? Will digital information and transformation be further driven? Will more emphasis be placed on open cooperation? Will more or less money be invested in innovations? During his talk, Frank T. Piller, Professor for Management and Co-Director of the Institute for Technology and Innovations Management (TIM), presented some of the observations he has made so far. He also asked the alumni for their opinion in a small interactive survey. The question on investments is particularly important for Professor Piller. He refers to a McKinsey survey from April 2020, which shows that most companies do not want to invest in innovations until the world has stabilized. “But the time to act is now,” the innovations expert believes. The experience particularly from the 2009 financial crash shows that companies that made investments in innovations during the crisis had a much better market presence than companies that hesitated to invest.

What new business models will be successful after the corona pandemic? A working group at the TIM is currently looking at this question. It has collected adjustments to business models, so-called example business models, from current and past economic crises, analysed them from a scientific perspective and prepared them for companies. This allows companies to look for specific solutions to their current situation or be inspired by the solutions used by others.

Even before the corona pandemic, machine-controlled processes and artificial intelligence drove innovations, in which algorithms almost take on a creator role and also determine their use. During the pandemic, “open innovation” was found to be the recurring concept for innovative processes. It uses external suggestions, technologies and concepts from people who normally would not deal with the problem at hand. Some examples include various collaborations between universities, hospitals and industrial companies to quickly produce ventilators. And finally: What effect will working from home have on creativity and the ability to innovate? Traditionally, 80% of all innovative ideas are the result of face-to-face communication. How will this work from a physical distance at home? Working from home clearly works for routine and project work. But does it also work for comprehensive transformational processes? Scientific research on the effect the pandemic has had on technical innovations has only just begun. Frank Piller does not see the pandemic as a real driver of innovation. However, it did lead to companies rethinking their usual business processes to find improvements or even to change entire business models. Incidentally, during the quick survey, most of the alumni believed that there would be more digital innovations in future due to COVID-19.

The aim of the talk was to give new food for thought on this topic and to raise awareness of current developments in this field. Piller’s statements were followed by many questions and contributions to the discussion from the alumni, both live on video and in the chat. Since the alumni team as the organizer of the online talk also received very positive feedback, the series of alumni online contributions, as a small innovation of alumni services, will be continued.

Dietrich Hunold
Between Digitalization and Face-to-Face Learning
First Virtual Meeting of American Alumni

Without a doubt, the corona pandemic accelerated digitalization at the university. In the last year, the entire teaching program was switched to digital formats within just a few weeks. During his presentation to the RWTH alumni of the North American Group, RWTH Rector Professor Ulrich Rüdiger mentioned important experiences from the past year. Since 2006, alumni meetings have taken place each year in different cities on the North American continent. Now, in cooperation of the North American alumni Dr. Gerd Schroth, Holger Kist, and Daniel Schimmel with the RWTH alumni team around Professor Bernd Markert, the Rector’s Delegate for the alumni network, a virtual format was used for the first time to renew old contacts and make new ones by video chat – as well as finding out the latest news from the alma mater. While everyone in Aachen was finishing work for the day at 5 p.m., more than 30 alumni, most of whom were just starting theirs, tuned in across the North American continent and in almost all time zones.

Rector Ulrich Rüdiger was delighted to tell everyone about the current developments at RWTH during this “revival”. The alumni were given many facts and figures about student numbers, budgets, faculties, Profile Areas, global university partnerships, as well as the Excellence Initiative and the university anniversary. Professor Rüdiger also told the alumni about his personal experiences in America as a post-doc at NYU in New York. Encouraged by the Rector, a lively discussion about further digitalization at universities ensued on the PCs, laptops and tablets after his talk. According to the Rector, RWTH was at the center of the analysis. “But I am convinced that scientific solutions can only be developed, discussed, and social responsibility accepted in face-to-face learning.” But Ulrich Rüdiger is sure that not all learning will remain face-to-face. “This is where we must further develop.”

The alumni paid particular attention to the information on the international university partnerships and networks. It turned out that some alumni are employed at renowned research institutes and universities and offered their support for potential exchange programs for students and staff. Alumnus Rainer Martini was very enthusiastic: “I am Vice Dean of the School of Technology and Science at the Stevens Institute of Technology in New York and I am very interested in contributing to and helping with exchange programs with RWTH.” The hurdles for visas for internships in the USA were also discussed. Some alumni have already had experience with this issue at their companies, which they could contribute to support RWTH.

In addition to the discussion with Rector Ulrich Rüdiger, the alumni activities in America became a key topic of conversation at the virtual meeting. Daniel Schimmel reminisced about the past 14 annual meetings that were held in different cities, such as Atlanta, Chicago, Washington or even Toronto or Puebla. After the “revival”, there are plans to continue the activities this year with a series of virtual talks. Initial ideas for topics, such as artificial Intelligence or space travel, are right at the top of the wish list. “Of course, we welcome other suggestions,” says Daniel Schimmel.

In his conclusion, Professor Bernd Markert commended the variety of ideas and opportunities for exchange. But he also sees a big challenge: “Even today, the USA is a dream for most RWTH students. But we must also manage to get young people from the USA over to RWTH.” He is particularly concerned about one issue: What will happen with universities after the pandemic? “We would be glad to hear some of the experiences from other countries.” Finally, Markert raised hopes that the alumni would have the opportunity to meet each other again in person in America in the near future.

Dietrich Hunold
Sponsors Wanted!
Take Part and Get Involved in the RWTH Education Fund!

Thanks to the participation of numerous companies, foundations, and private individuals, the RWTH Education Fund supports excellently trained and committed students with a monthly scholarship for at least two semesters. As part of the Deutschlandstipendium, students receive a scholarship of 300 Euros per month for one academic year. The University raises one half of this amount from private individuals, companies, or foundations. The other half is provided by the Federal Ministry of Education and Research.

Whether you would like to give something back, thereby making a major contribution to supporting education at RWTH Aachen University, or would like to contact the best students from Aachen early on and get to know excellent young talent – we look forward to receiving your donation!

More information is available at:
Tel.: +49 241 80 90839
bildungsfonds@rwth-aachen.de

www.rwth-aachen.de/bildungsfonds

Alumni also support the best students.
20 Years of the INCAS Student Organization
Request for Video Messages From Former Members and Friends

With the support from RWTH and the General Students’ Committee (ASTA), RWTH alumna Susanne Bräutigam founded the Intercultural Center of Aachen Students (INCAS) 20 years ago. On March 1, 2001, INCAS opened its office and quickly became the first point of contact for international students with its intercultural events. In the same year, it received financial support from the DAAD, and FH Aachen University of Applied Sciences became a cooperation partner two years later. The City of Aachen also registered its activities, and as a result, INCAS received the Integration Prize of the City of Aachen in 2012.

Over the years, as a result of the rise in the number of international students in Aachen, the new student initiative turned into a meeting point, giving students an opportunity to talk and share ideas on culture. Many events allow them to expand their horizons in a relaxed atmosphere or to make contacts with students from all over the world. For example, students could practise their language skills at the Café Lingua, or discover variety of new dishes at a brunch or international evening.

For this year’s anniversary, INCAS is looking forward to seeing video messages from alumni and friends of the organization. These will be published together with all other greetings on the INCAS Instagram page @incasaachen.

Contact: incas.rwth@googlemail.com

More activities are planned for this summer at the Alexander von Humboldt House, if the pandemic allows.

- Linh Le, Thomas Castro Schmidt

By video on “International Tuesday”

Tuesdays are “International Tuesday” for INCAS at Humboldt House. It would have been perfect to throw an anniversary party this year, on Tuesday, March 2 – almost on INCAS’s exact birthday. However, the pandemic did not make it possible. Therefore, the anniversary was celebrated as an online meeting, which INCAS founder Susanne Bräutigam also attended:
“Meeting the current students was wonderful! We chatted until nearly midnight, exchanging experiences from then and now. Thanks to social networks, it is so much easier nowadays to get in touch with the students. It was great that alumni who now live further away could also take part by video call, such as Andrea from Colombia. But as nice as it was, a real meeting during the summer would be something special …”
Walking through Malteserstraße from the Ponttor, there are no signs that the famous Malteserkeller jazz club was once behind door number 14. Nowadays, the street front is home to a modern residential and shopping complex. In the 60s and 70s, this jazz club was a major part of student life in Aachen. The Malteserkeller was opened in 1958 and was actively supported and funded by RWTH in the form of a registered association.

In 1995, the Malteserkeller was forced to close for several months due to the new "Milchstraße" construction project. After it reopened, its 50th anniversary was celebrated. In 2011, the Malteserkeller closed its doors for the last time as the lease was not renewed.

Former students Siegbert Storch and Jan Werth, who were closely associated with the club for many years as managers of the club and as musicians, wrote a book about the history of the first ten years of the Malteserkeller (1958-1968). This book was initially intended for the students at RWTH who experienced and helped shape this time. But it also features an interesting section and an example of the history of a jazz club from a time when jazz in all difference varieties was the music of choice among the student generation back then.

Student and music lover Gerhard Egbers, who would later run the Institute for Textile and Fiber Technology at the University of Stuttgart from 1981 to 1998, tells the story about the discovery of the Malteserkeller. He describes how he discovered a vault that was difficult to access under his stu-
with international jazz musicians on several occasions. The student parliament and the FAHO (today proRWTH, editor’s note) also helped by offering higher sums of money.

**Different styles**

Young Aachen pupils and students from various fields were given the opportunity to rehearse and give their first performances at the Malteserkeller. No one imagined back then that some of them would even gain national and international recognition.

In the mid-60s, the student music-enthusiasts were inspired to form new Dixieland bands. In addition to the Aachener Darktown Stompers, the New Orleans Wanderers, the Kingstreet Jazzgang, the Border City Six, Tante Frieda’s Jazzkränzchen and the High School Hot Seven were formed. These amateur bands gave regular performances at the Malteserkeller.

The house bands in the first year were the Aachener Darktown Stompers as well as the Modern Jazz Group Aachen, in which drummer Kurt Bong, who later became a member of Doldinger, Dauner and Max Greger, and then manager of the HR Bigband, gained his first experiences. In addition to many amateur bands, the organizers quickly managed to hire young professional modern jazz musicians. Manfred Schoof and Alexander von Schlippenbach were guests in the Malteserkeller in 1962 with their band “Jazz Cookers”. 1963 proved to be an eventful year. The Gunter Hampel Quintett with von Schlippenbach, Schoof, Niebergall and Courbois also performed for the first time in the Malteserkeller. This group recorded “Heartplants”, which became trendsetting for European free jazz the following year. Known Dixieland bands, such as the Dutch Swing College Band, the Barrelhouse Jazz Band from Frankfurt, The Traditional Jazz Studio from Prague and the Boogie Woogie Company from Cologne also performed. If the capacity of the Malteserkeller was too small, the concerts were held in the Maximum Auditorium or in the Red Lecture Hall in the University.

All known stars of the German jazz scene, from Mangelsdorff and Brötzmann to Kühn, Dauner, and many international musicians handed out their business card at the Malteserkeller in the years to follow. Performances by the Albert Mangelsdorff...
Quintett were so popular among the Malteserkeller crowd that the vault was filled to the rafters each time. Alto saxophonist Günter Kronberg from this quintet was booked to perform at the Malteserkeller together with musicians from the Aachen jazz scene.

Particular highlights included concerts with well-known jazz musicians from the USA, such as the Jimmy Giuffre Trio, Leo Wright Quartett, Don Cherry Quintett, Carla Bley Quintett, Booker Ervin Trio, Archie Shepp, and Chet Baker. The Malteserkeller also enjoyed a lively exchange with the neighboring Belgian jazz scene in Liège – alto saxophonist Jacques Pelzer and guitarist Gitarrist René Thomas were regular performers at the Malteserkeller. This link resulted in a memorable performance by American trumpeter Chet Baker in 1963. Since he was not allowed to enter Germany, a suitable solution had to be found so that he could perform in Aachen. One foggy night, Chet Baker was driven in the trunk of a car from Belgium over the border to the Malteserkeller.

The book
A variety of photos, historic documents, program lists, old association documents, including contracts with the bands on torn-off pieces of paper, created the story of the Malteserkeller between 1958 and 1968. Together, these two authors used the materials to bring the vault activities during this period to life. A separate chapter lists the dates of all performances between 1958 and 1968, as well as the bands that performed in the jazz cellar and around the Malteserkeller with the names of all musicians.

An introduction to the situation of the Aachen jazz scene before the Association was founded as well as many stories, including recognition of Robert Wenslers, the mentor of the Aachen jazz scene, complete the story. Many concert photos and documents take the reader back to the RWTH student life.

Former student and current musician Heribert Leuchter describes how important the Malteserkeller was for student life in Aachen. In his words, the Malteserkeller created a new attitude to life in Aachen, it was a “political statement”. A new sense of freedom developed in the depths of the vault together with the free spirit of a peaceful musical revolution. It was a time when jazz in all difference varieties was the music of choice among the young generation.

Jan Werth

Siegbert Storch / Jan Werth
Malteserkeller in Aachen
History, jazz scene,
Concerts 1958 – 1968

MK Edition, 240 pages, 20 Euros
Source: Aachener Buchhandel and tel. +49.241.38076
RWTH Among Top Universities for Biology, Chemistry, and Computer Science According to CHE Ranking

The Centre for Higher Education Development (CHE) ranking for the subjects of Biology, Chemistry, Mathematics, Physics, Computer Science, Geography, Earth Sciences, Political Science, Medicine, and Dentistry has just been published in the DIE ZEIT Student Guide. RWTH is in the top group for biology, chemistry, and computer science for all published criteria.

The basis of the rankings is a student survey on study conditions, university facilities, and lecturers. The students rate their university from “1 – very good” to “6 – very poor” and the ratings are then combined into various indicators. For each indicator, the universities are sorted into top, middle, and bottom groups.

ERC Advanced Grant for Research on Early-Life Infections

The physician and RWTH researcher Professor Mathias Hornef, Director of the Department of Medical Microbiology at Uniklinik RWTH Aachen, has been awarded an Advanced Grant from the European Research Council (ERC), worth 2.5 million Euros, for a funding period of five years. The funds of the award will largely be used to research the role of intestinal infections in early childhood and to identify mechanisms of disease susceptibility in later life through differentiation and functional changes in the intestinal epithelium.

RWTH Start-Up in the Final in the USA

A four-person team from the Institute of Textile Technology (ITA) at RWTH Aachen University took third place at the 21st Rice Business Plan Competition (RBPC), the world’s largest and most prestigious student start-up competition. In the pre-selection, the FibreCoat team from Aachen prevailed against more than 440 competitors from all over the world, making it one of only two international teams that made it to the final in addition to universities such as the Massachusetts Institute of Technology, Harvard University, and the University of California. The only European university represented was RWTH Aachen University with the scientists from FibreCoat. At the RBPC, the company also received the TIE Houston Angels prize of 100,000 dollars and the “Best Hard Tech Elevator Pitch” prize of the Mercury Fund of 500 dollars. FibreCoat GmbH produces inexpensive high-performance composite fibers with the help of a highly productive spinning technology.

BMBF approves Käte Hamburger International Center

The German Federal Ministry of Education and Research (BMBF) approved a Käte Hamburger International Center for RWTH Aachen University. Beginning in May, the program, entitled “Cultures of Research,” will be funded for an initial four-year period with more than nine million Euros. The Center will be headed by Professor Gabriele Gramelsberger, Chair of Theory of Science and Technology, and Professor Stefan Böschen, Chair of Society and Technology. The Center – named after German Studies scholar Käte Hamburger – is to fund new perspectives for top-level research in the humanities and the social science. The RWTH application won in the competition: The Center will focus on transdisciplinary research between scientists of the humanities and social sciences, as well as the natural and technical sciences. It is the first Käte Hamburger Center to be set up at a university of technology.

RWTH Awards the “IntSpire” Prize for the First Time

RWTH Aachen University awarded the “IntSpire” Prize for the first time. In the future, this award will be presented on an annual basis to employees, students, chairs, institutes, or institutions of the University that have especially fostered an international culture at RWTH. More than 12,000 students and 900 employees with an international background study and work at RWTH, so embracing internationality is a fundamental feature of the University. The Institute of General Mechanics (IAM), headed by Professor and Rector’s Delegate for RWTH Alumni, Bernd Markert, won the prize against 30 other nominations. The welcoming culture, the international working environment, and intercultural exchanges in projects were all factors that convinced the jury. For example, their partnership with Mexican university Tecnológico de Monterrey enables students to spend time in the country.
Alumni Up Close and Personal

“The courage to act.”

An Interview with Dr.-Ing. Christina Reuter, Head of Digital Design, Manufacturing and Services (DDMS) at Operations at Airbus Defence and Space and Supervisory Board Member of KION Group AG

Photo: Elisabeth Blass Fotografie
In 2015, Christina Reuter, who graduated in 1985, was still Senior Engineer at the Laboratory for Machine Tools and Production Engineering (WZL) of RWTH Aachen University and managed the Department for Production Management with around 25 researchers, programmers, and around 50 student assistants. At the time, she worked closely on the topic of Industry 4.0, and particularly played a key role in the development of the Demonstration Factory on Campus Melaten. Back then, she received a inquiry from a headhunter who became aware of the young engineer as a result of various publications, conference visits, etc. There were further talks with representatives of the Supervisory Board as well as the Chairman of the Management Board of the KION Group. She was then nominated as a new member of the Supervisory Board at one of the world’s leading providers of forklift trucks and storage technology at the General Meeting in 2016 – and appointed by the shareholders as the youngest Supervisory Board member in Germany at the time.

Since 2017, Christina Reuter has held various management positions at Airbus Defence and Space. She was particularly called in to assist with the digitalisation of the highly complex production and service processes. In addition to her career, she is dedicated to supporting women on their journey to reaching top management positions and advocates for more diversity in the management levels in companies. The Aachen native and now young mother believes there is a huge need to reform education and particularly played a key role in the corona situation allows – visits to factories to gain an immediate impression of the products, production, or the type of work.

“\nI find it exciting as a Supervisory Board member to be involved in all major decisions.\n”

When you were appointed to the Supervisory Board in 2016, there were many reports about you in the German financial press. Were you prepared for this huge media response?

Funnily enough, the media response came later, not right after I was appointed. I didn’t encourage it either, it was not my main intention to appear in the media. When I started at KION, I was, of course, given extensive training, particularly with regard to rights and obligations. This was very important because I didn’t have any experience as a Supervisory Board member.

In fact, there was also a training module “Handling the Media” that I found helpful. One benefit of the reports in the media was that I could act as a role model, particularly for young women, so they can see what is possible and what they can achieve.

You have been working for Airbus Defence and Space since 2017 where you quickly took on a lot of responsibility as head of a production department.

Yes, my duties included managing production plants where components for building satellites were made in cleanrooms. These components are required, for example, for processing data, navigation etc. Then at the start of 2020, I took on a new role at Airbus Defence and Space. I was head of the operations program “Digital Design Manufacturing and Services", a kind of digital transformation program if you like. It looks at transforming how new product programs will function in future using a constant flow of data, all from the start of development up to services. The aim is to boost productivity and effectiveness along the entire life cycle. The exciting thing about this transformation program is that it runs through all areas of the company and I can combine strategic aspects as well as functional tasks. I am currently on maternity leave, so my focus is on entirely different things.

Digitalization and digital transformation are terms that we are hearing and seeing more and more, particularly in the current corona pandemic. Digital transformation is defined as a cultural change. What does this mean?

When we talk about digital transformation, there are different perspectives: One is an internal perspective which involves increasing process efficiency, and the other is an external perspective, for example, to develop new business models. To come back to the internal perspective, companies often focus on new technologies but I believe they are only a means to an end. We could think: OK, we now have 3D printers, robots, we now have state-of-the-art digital technology, and have completed the digital transformation. But this is not true, we need to take a more differentiated approach to the issue. Ultimately, it is about companies achieving their goals and reconsidering the way that companies work together using new technologies.

It is important that information is available, so employees do not have to spend ages looking and can be given the best possible support. We need to improve collaboration within the company in order for it to become faster, more cost effective, and
more efficient. This creates a different type of cooperation. And if digital transformation fails, this usually has less to do with technology and more because the cultural, human aspect was neglected or forgotten. What makes German companies unique? It’s technology, but also the employees who have such a wealth of knowledge. We need to help them make better use of these strengths with new technology.

At the WZL during your doctorate, you also helped to developed the so-called Demonstration Factory Industry 4.0. What is so special about the Demonstration Factory? What makes the Demonstration Factory so special was and is that new technologies can be developed, tested and implemented with other companies, other software providers in a physical production environment. The Demonstration Factory was also used to make prototypes for street scooters and e.GO. So we had a real production environment and not just a learning environment with building blocks. This is an important unique selling point. We built a big “playground” with various IT systems. The systems were connected with each other to show examples of what is possible with this new type of networking. At the same time, we had created a learning environment in order to train employees from the industry to show what can be achieved with this new kind of cooperation. For example, we conducted assembly processes with and without this tool in order to see the difference. This was a very rewarding time for me.

You are also active in the “Generation CEO” network, a network of top female managers. What do you think are the chances for more women to reach top positions in companies in the future? Keyword women’s quota. I don’t even know where to begin. It is still not easy for young women to gain a foothold in male-dominated professions and to reach high management positions. Unfortunately, that’s a fact and due to different factors – the press often say child care, but I would like to say more on that later on. The top positions are often taken by men or within male networks because the first step is easier for them. It is human nature to want to be surrounded by similar people. This makes it easier to talk on a similar wavelength. Yet various studies have shown that teams that are diverse work better. I think that particularly in innovation-driven industries where it is important to focus on customer benefit, it is essential to look at different perspectives. And to do this, we need diverse teams, not only women, but also different qualifications, experiences, and cultural backgrounds. We urgently need to act. And coming back to the topic of women: It is not fair to neglect half of the population, and companies also cannot afford to continue operating like this in the future. Companies abroad are further on than us.

From a human perspective, it is clearly very difficult or not all that common to imagine women being successful in management positions. Luckily, there are more and more positive examples of this. These networks, such as “Generation CEO”, in which I am also a member, are there to showcase these role models and to give women a platform to learn from each other and support each other. But I also think it is necessary not only to think in men and women, but to be more open because we also need men for the transformation. We need men who understand and take the initiative to drive this change. Of course, diversity may also lead to friction, but it is necessary for innovative fields of work to be diverse. The discussion about the women’s quota has at least given the issue certain attention in the media. But I do not believe this solves every problem, especially since this women’s quota in management boards only affects a very small number of companies and it has still not been implemented. But it is a step in the right direction – even if I believe the women’s quota to be a necessary evil.

You are now a young mother. Do you believe it is necessary to aim for a cultural change in the understanding of the roles between men and women, particularly with regard to family? I think that is one of the most important factors. I recently saw a satirical illustration in the ZEIT. It was about the question of who has children in Germany? Statistically, it is, of course, men and women equally. But from an employer’s or society’s perspective, it is only women. This needs to change. I see that more and more men are taking responsibility for their family. In fact, society has not yet fully realized that men and women should bear equal responsibility, and men can do more for their family. We still have a long way to go. It often starts at nursery that these traditional roles are encouraged. When my first daughter went to nursery, I looked at different facilities. And they said: Here is the research corner for the boys, and back there is the painting corner for the girls. What more do I need to say about this ... and that was in 2017. We need to fight with all means necessary to make society more modern. This is beneficial for everyone. Maybe one particular positive aspect of the corona pandemic is that we saw more fathers in video conferences who were also looking after their children at the same time. I think this is a good sign. We saw that yes, ultimately we are all human and it is not just the mothers that look after the children, but also many fathers. It is an absolute privilege to experience this family life.

You spent a year in Beijing and did a double Master’s degree at Tsinghua University. What were your experiences during this time? The exchange with Tsinghua University was such an enriching experience. I would not hesitate to do it again, even if that means having to deal with poor air quality. I found it interesting to see how different the Chinese students lived, learned, and thought. It was truly a different way of
studying. And sometimes, it wasn't all that easy to make direct contact with them because they were so focused on studying. Tsinghua is known throughout China for its tough selection process. Those who are accepted are under huge pressure to do well, so they spend all their time at their desks.

We were also able to visit companies there. Back then, the Chinese representatives were very proud of the fact that they copied things from Germany. Since then, many Chinese companies have, of course, further developed and it is important to look at where there are opportunities to work together. The Asian market is so important, particularly for Germany, that we absolutely must cooperate. It is certainly not very easy at the moment for German companies to position themselves in the field of tension between China and the USA. But many German companies have established partnerships with Chinese partners in order to gain a better foothold and better understand the Chinese customers. Ultimately, cooperation generates added value if the different strengths from different countries can be combined.

Christina Reuter is still so thankful for the enriching year she spent at Tsinghua University in Beijing.

With the degree in mechanical engineering from RWTH, your doctorate and the Tsinghua double Master's, you have had a very intense academic career. What important experiences from your education proved to be particularly helpful later on in your professional life?

I think it was a mixture of different factors, and I am convinced that every situation can provide valuable experiences. I must admit that when I started my studies, I had no idea what I could do with it after. I chose
my field of study purely based on my strengths in scientific subjects. It was only during my studies that I discovered what options were open to me and was amazed. I was always close to companies, even as a student assistant at the WZL where I was actively involved in projects. This had a huge impact on me and I definitely benefited from this because I was not just studying theory at a desk, but could combine it with many practical elements. And, of course, the experience abroad was an absolute highlight. I am so grateful to have had the opportunity to experience and get to know a completely different country as part of an organized exchange and even complete a double degree.

My doctoral time at the WZL was also very influential for me – full of industrial tasks, research elements, teaching, seminars, a really wide range of activities that challenged me but also strongly encouraged me. The opportunity to gain management experience was also important – first, I was group leader, then department leader – full responsibility that you cannot get so quickly elsewhere. I could try things out, help shape them, and work on future issues. So it was a mixture of specialist elements as well as soft skills, management experience, organization, and networking. From my studies, I built up an excellent network of people who work in industry or science. It is very helpful to exchange ideas.

You are a jury member of the “Vordenker” initiative of the Handelsblatt and BCG that aims to increase the visibility of and support management trainees and talents. What makes someone a talent? That is almost a philosophical question. I actually think that everyone has talent, personal strengths. What is important is identifying them and knowing yourself well. What can I do well that others cannot do as well? What makes me different from others? That is the first step. The next is to think, how can I incorporate my personal strengths in a productive way? So: What problems can I and would I like to solve? In a social context, in a company, in research. It is important to gain a variety of experiences to get to know yourself better.

You mentioned the jury activities before. I am also a jury member of the German Digital Award “The Sparks”. This is awarded to start-ups that show great promise in certain fields. I find it very exciting to see how young people advance issues, gain a change in perspective – and particularly the courage young people have to make the world a bit better. It is personal curiosity, enthusiasm for other people, and innovations that led me to be part of the jury.

This would be a good place to end our interview. What you have already said has answered the mandatory question on tips for students … .... yes, I think it is particularly the courage to act that is often missing in young women – if I can stereotype. Sure, some things can go wrong, but at least you have learned a lot. I am convinced that there is value in every learning experience – be it good or bad. These experiences are all “enablers” that help you to tackle future challenges. That is what I would like to say to young people. And I also try to encourage young women to pursue sciences. I don’t see any reason why there are so few women in this field. There is so much potential.

“I am convinced that there is value in every learning experience – be it good or bad.”

But ultimately, too few women are pursuing careers in science. This is another issue in society formed from earliest childhood that women can’t do calculations and are more interested in languages and the humanities, without meaning to degrade these fields. So those women who do go into science are pretty good. And this, yet again, has to do with courage, with role models: we can do so many good things. It always makes me happy when I do succeed in encouraging some young women. I think we all need to make the case for this more strongly in universities and schools.

I hope that this interview can help and thank you very much for the chat.

Dietrich Hunold
Global megatrends, future strategies, investing billions in innovation, sustainability and providing the world with health and nutrition: When Oliver Kohlhaas talks about these topics, it is immediately clear that the 47-year-old has found his dream job. But his dreams were completely different at RWTH in Aachen: researching automorphic forms in analytic number theory as a student and research assistant in mathematics.

Today, Oliver Kohlhaas is the Head of Strategy at Bayer AG. With around 200 employees worldwide, he is responsible for Strategy and Business Consulting. The team consists of 20 colleagues working on group strategy planning and around 180 in internal consulting. Each year, the department employs around 40 to 50 new colleagues, most of them straight out of university. After around four years, employees typically move to another role within the divisions of Pharmaceuticals, CropScience, Consumer Health or in a central function of the company. “Around a third change their career plans during their time with us because they get to know new fields, sharpen their own interests, or simply get an offer they cannot refuse. It is fantastic to bring along such paths and developments,” enthuses Kohlhaas.

Bayer is a well-known company around the world and has a good reputation but is currently subject to public discussion and criticism after the acquisition of Monsanto. Kohlhaas believes that this acquisition is good example of what strategy is about – making good decisions under uncertainty.

The fact that this does not always lead to the best possible result is the nature of the matter. “If I have six correct numbers in the lottery, I have a good result. But actually, I made a bad decision. From a strategic perspective, the purchase of Monsanto was and is the right decision,” explains Kohlhaas. He generally describes the job of his strategic role as follows: “Our job is to ensure the quality of long-term decisions under uncertainty – without a crystal ball or Harry Potter’s liquid luck potion.”

And it is not getting any easier. The corona pandemic and digitalization pose new challenges to the company strategy. There are growing uncertainties, planning periods are becoming shorter, and experience-based decision logic is losing importance. Despite this, Oliver Kohlhaas believes a robust...
strategy is beneficial, particularly in this day and age. “The implementation and the success of a good strategy are accelerated during the pandemic. Companies or businesses that need a new strategy in the pandemic are more likely to have problems,” he has noticed. The day-to-day work within his teams can be easily completed during the pandemic. Consulting projects and strategy development from home are not a problem, even application and hiring processes work virtually.

Sustainability is becoming increasingly important in the discussion of company strategies, but Kohlhaas fiercely disputes that it is some kind of fashion trend. He points out that Bayer has been a successful company for more than 150 years partly because the company has always been able to reposition itself. Something similar is happening now. “We laid important groundwork in the strategy discussions in 2019. Since then, we have not been pursuing a sustainability strategy; we implement sustainability as part of our business strategy. This is an important difference,” explains Kohlhaas.

The definition of business success has also changed: non-financial goals in line with the sustainability goals of the United Nations are coming to the forefront. “And this is precisely where Bayer can make an important contribution,” says Kohlhaas. “By 2030, we will be carbon neutral and make a positive impact on social and economic development in all divisions. Financial and non-financial goals are on an equal level and are pursued equally in the strategy.”

In 2020, Bayer set up a Sustainability Council with leading external experts that advises the Management Board as well as Oliver Kohlhaas. The top priority of this committee is to provide criticism in a clear way. “Sometimes there is quite a lot to listen to,” admits Kohlhaas, “but that is what helps us.”

Kohlhaas particularly sees this as a major opportunity for Bayer: “Agriculture is responsible for around a quarter of global greenhouse gas emissions. Our business reaches around a quarter of global agriculture, providing it with relevant products, such as seeds or pesticides. This is enough to realise how important our responsibility is.” He works out what positive effects innovations, such as short stature corn or dry seeded rice, could have on our carbon footprint. But this is not enough. “If we reach our goal and give a further 100 million women access to modern contraception by 2030, all of this would make economic, social, and humane improvements in societies,” says Kohlhaas. But strategy is not his only area of responsibility. In internal consulting, varying project teams work on more than 100 projects per year. They support managers in strategy development and implementation, as well as in important functional initiatives. The team is present around the world and works in the four global practice areas “Research and Development”, “Product Supply”, “Marketing and Sales,” and “Change and Transformation”. Kohlhaas emphasises that every consultant can submit their preferences for staffing based on region, topic, or project type in order to manage development, even if the management team cannot fulfil every wish when assigning members to the team. The boss is quite relaxed in this respect: “Some have already been pleasantly surprised on unpopular topics, or the area of choice turns out not to be that attractive.”

Speaking of areas of choice. Today, the mathematician has very little to do with the field he had once chosen. “The love of detail and analysis as well as looking at the big picture and abstraction are certainly helpful,” says Kohlhaas, “but the functional characteristics of automorphic forms are reality-neutral. Basic arithmetic operations are enough for me today.” Kohlhaas would have liked to have stayed at the university. “My dream was to become a university professor of mathematics one day.” His wife also studied mathematics at RWTH. They had their first child in 1998 during his time as an assistant in Department A of Mathematics making the young couple a family early on. “The prospect of temporary positions and a rocky path into research and teaching put both of us off,” says Kohlhaas. Together, they decided to leave the field. From there things moved quickly. After a few years in management consulting, Oliver Kohlhaas joined the company in 2002. After joining, he was promoted every two or three years to new roles of increasing responsibilities.
His start in industry did not go particularly smoothly. “I tended to give my opinion of right and wrong a bit too forcefully and sometimes without properly reflecting,” remembers Kohlhaas. “Twice, my first boss gave me candid feedback on this for which I learned from. Looking back, I am very grateful that he did.” Effective problem-solving has both an analytical as well as a social dimension. Changing perspectives and differentiating what is effective, feasible, too risky, or socially expected is also necessary. The mathematician did not always find this as easy as he seems to today. The term career planning means very little to him. Just like with strategic planning, he also sees an increase in uncertainty in personal planning with yet more and more opportunities. Broadening your skills and experiences is becoming increasingly important, says Kohlhaas. Life-long learning is key and highly supported at RWTH. This type of personal development is becoming professionalized. His own development also reflects how career paradigms develop over time: “I owe my thanks to important mentors for two early important steps in my career, and two key steps later on in my career are thanks to colleagues in the HR department and rational talent management.”

Today, he tries to align developing the skills of employees with the strategy. “Of course, I consider myself a mentor and try to help with development. But the key principle for people development in my department is clear – you drive, we care”. He sees a considerable, almost burdening pressure in many young people to improve themselves. “I always advise them to be relaxed and open-minded about finding and using development opportunities, ideally in an environment in which they can enjoy purposeful work,” says Kohlhaas. “Doing a fifth internship no longer helps to make better choices.” He believes that Bayer’s company vision “Health for all, hunger for none” is purposeful and universally motivating. The company’s mission “Science for a Better Life” is important, particularly for physicians, researchers, or engineers like those trained at RWTH and a position in his team offers a steep learning curve to young professionals who are interested in in-house consulting.

Oliver Kohlhaas becomes somewhat pensive when asked about his most difficult personal challenges in his career. He believes such situations always arise when personal loyalties conflict with professional requirements or if there is such a perception. As an example, he talks about his early and intensive involvement in the sale of the Animal Health business at Bayer, a division where he worked for a long time. “My former boss and head of the division was a close personal friend. During a critical phase when the sale of his division was getting under way, I could not be open with him. He understood this afterwards because I had to keep a transaction of more than 7.5 billion dollars confidential. But at the time, it really bothered me.” Eventually when the transaction was done, they were able to clear the air. In the end, this colleague is a true professional. “Even today, we still meet up for a glass of wine, when the pandemic situation allows for it.”

Oliver Kohlhaas remains connected to RWTH. There are many partnerships with Bayer in various divisions, particularly in R&D and Engineering. For his own department, Kohlhaas mentions the partnership with the Research Institute for Rationalization in making network optimization decisions within supply chains. Many of the young professionals in consulting are RWTH graduates. Kohlhaas as an alumnus also wants to make a personal contribution. As an industry representative, he collaborated on an audit in the department of mathematics, during which he met some familiar faces. The most important connection to RWTH is his youngest son, who started studying electrical engineer-
Science & Industry

Proactive, Goal-Directed, Creative, Clear, and Consistent

Reflected Decision-Making Using an Internet Tool: The DECISION NAVIGATOR
Each winter semester, more than a thousand RWTH students attend the lecture “Decision Theory” with the goal of improving their ability to make decisions. They learn this with the support of an Internet tool, which guides the user in random decision problems and navigates them through the process in many small steps. The DECISION NAVIGATOR is freely accessible online. It was developed by the Teaching and Research Department of Decision Research and Financial Services (EFi) and further professionalized after the first, very basic prototypes were made at the start of the project in 2017.

Decision-making power means the ability to make reflected decisions. In this context, reflected means proactive, goal-directed, creative, clear, and consistent. The individual steps of the clearly structured guide in the DECISION NAVIGATOR reflect these five characteristics (Fig. 1).

Proactivity means not waiting until it is necessary to react to a decision-making problem, but consciously looking for situations that can be considered a decision-making opportunity and therefore as a fundamental option. The first step of the DECISION NAVIGATOR is formulating the decision-making situation in a specific decision question. It is helpful here to avoid simple yes-or-no questions. Users are trained to formulate wider and open decision questions (e.g. “how” questions) in order to consciously allow more leeway to find new and better courses of action.

The second step is to formulate goals. While decision-makers usually find it easy to specify some obvious goals, they find it challenging to identify the fundamental values that are key in decision-making situation. When a goal is set that is actually only a tool to achieve something else that is very important, then only the very important goal should be stated. Reflecting means differentiating between so-called instrumental and fundamental goals by asking many “why” questions and then finding understandable and suitable terms for the fundamental goals in the mind map of the tool (Fig. 2).

After formulating the goal, the next step is to identify alternative courses of action. Since relevant studies have shown that people do not come up with many attractive alternative courses of action by themselves in many cases because of cognitive blinkers, the DECISION NAVIGATOR helps here by using various systematic brainstorming methods. These methods are based on the formulated fundamental goals so that the newly developed alternatives can be attractive for what is truly important. Reflected decision-making therefore also involves creatively finding new solutions.

The fourth step is to state how well the alternative courses of action can be categorized in the defined fundamental goals. When completing the so-called result matrix, users run the risk of entering the result assessments in a systematically distorted way. Researchers talk here of possible biases in the assessments. The DECISION NAVIGATOR explicitly addresses the most important biases and therefore makes users aware of these errors, and helps them to provide assessments with as little bias as possible. This is what “clear” means.
Finally, the alternative courses of action must be evaluated. The assessments from the result matrix must be transferred to subjective benefits and weightings as assigned to the defined fundamental goals. The DECISION NAVIGATOR offers extensive support and a variety of assessment options, as can be expected in a scientific tool: Sensitivity analyses, clear comparisons of the pros and cons, and robustness tests with Monte Carlo simulations in the event that some parameters could not be entered accurately. Even though the process in the DECISION NAVIGATOR provides an analytical framework, the philosophy of the process also includes intuitive gut feelings. Because the benefit of intuitive decision-making processes is that users tap into all of their experiences, which is not always easy in analytical models. Therefore, the most important goal in this last step of evaluation is identifying discrepancies between the analytical result and gut intuition and eliminating them by including additional insights and corrections. Experience has shown that only when gut and head come to the same result can the desired outcome be achieved – implementation of the decision.

**Personal study and career decisions: Experiences from the lecture hall**

The students usually work with the DECISION NAVIGATOR over several weeks and are to make a reflected analysis of a real decision-making situation of their own. Most students select questions on how to further structure their studies, on selecting an internship, part-time jobs or work-life balance, and, among advanced students, starting their working life. It is a voluntary task for which students receive a small grade bonus and in which around half of the audience takes part. The feedback from the students who took this process seriously is extremely positive. Guided reflection of their own goals and preferences gave many participants valuable advances in understanding how they can structure their life that they had not expected beforehand in this form (see detailed feedback at www.proaktiv-studieren.de).

24-year-old student Philipp Steitz gave his opinion: “The DECISION NAVIGATOR really helped me to see the question about my future career path in a structured way and particularly from a distance.” However, a considerable amount of time and effort is required to make a fully reflected decision, taking more than eight hours on average. Some students even say that they worked on the project for more than 40 hours. But it is not just about solving the decision problem. The aim of the project is also for users to acquire decision-making power that will be echoed in all other decisions as a result of an increasingly reflected way of thinking.

An important finding from the previous project rounds is that it is useful to offer additional coaching to support the analysis process with the DECISION NAVIGATOR. Some cases showed that without support, the tool is too demanding of users. But overall, the application field “study and career planning” for use of the tool at universities seems to be particularly suitable for training decision-making power. Three other universities have become aware of the project and have included coached courses based on the navigator into the curriculum for their students. Mendy Tönsfeuerborn, who has been an assistant at the EFI for two years and is a member of the navigator project team, is a coach and can also give the training courses even during the current pandemic on Zoom from Aachen. Anja Robert, who is responsible for the Career Center at RWTH, also supports the project: “The navigator is really well thought out and will certainly be a good additional option of reflection for students when thinking about the next steps in their career. In future, we would also like to use the DECISION NAVIGATOR to support our consultation processes and plan to intensify the cooperation.” The Career Center at the ETH in Zurich has also recently expressed its interest.

[www.proaktiv-studieren.de](http://www.proaktiv-studieren.de)
The DECISION NAVIGATOR in business consulting

Reflected decision-making is also ideal for decisions in companies. Yet this involves additional challenges, particularly combining the information, assessments, and preferences of those involved in making the decision. To date, the DECISION NAVIGATOR does not offer any functions for this, even though this is on the developers’ agenda. However, consistently following the decision-making process can increase the quality of decisions made in companies and improve the efficiency of the process. Group decisions often result in endless and unproductive discussions because the group failed to pinpoint the actual decision question as the first step of the process. By following the process steps, typical biases from group decisions can also be avoided, such as an unequal weighting of the information available (“shared information bias”) as well as establishing positions believed to be agreed by the group too quickly (“confirmation bias”). However, in order to improve the quality of the decision, it is essential to discuss the fundamental goals pursued in detail and agree on this before thinking about which alternative courses of action the group would like. Not doing so results in the group putting its energy into a discussion on advantages and disadvantage of similar alternatives, often even for irrelevant instrumental goals. And the group fails to put their energy into creatively finding even better solutions.

Some students gained an in-depth understanding of this kind of consulting process based on the reflected decision-making process in special project modules and are now applying it. Marius Leroy, a Master’s student of business studies, is writing his thesis at 1. FC Köln and is conducting his own workshops in order to find an ideal concept for mobile working with a group of seven participant from the club’s management. Marisa Schirmer, a Master’s graduate in business studies, and her colleague Christina Mayer from the Institute of Applied Work Science (IAW) used the DECISION NAVIGATOR to provide consultations to Lebenshilfe Werkstätten & Service GmbH in Aachen. Managing Director Norbert Zimmermann, who was initially sceptical about using such a complex decision-making process, was certainly impressed in the end and praised the opportunity to be able to think in a creative, value-driven way but without losing the clear structure of the process. Dr. Florian Methling transferred from the EFI to strategic business consulting at the Strategic Decisions Group and used the concept at Bayer Pharma AG to assess early-phase development projects. Users were very impressed with the process and particularly with the achieved transparency of the contents.

The DECISION NAVIGATOR in social and political issues

It is clear that many socially important questions and developing political strategies require an even more reflected approach than we all too often experience. For example, on the issue of which concepts can be used to most effectively achieve an energy transition, Tim Höfer, a doctoral candidate at the E.ON Energy Research Center in the Kopernikus
project ENSURE, used the DECISION NAVIGATOR to assess possible scenarios for implementing the energy transition. The workshops with the stakeholders involved, which included environmental and consumer associations, churches, and trade unions, were particularly challenging. Several workshops later, participants were able to agree on a target system, despite varying opinions, and the reflected decision-making process could be fully implemented.

In order to train students in issues that are similar or to generally find creative solutions to other social issues, they can choose project modules with this focus at the EFI. The students can independently approach politically challenging topics in a systematic way using the reflected process, and come up with good solutions without other political restrictions. Some issues were selected in collaboration with the City of Aachen and regional politicians from various parties who were generally open-minded to the process. A vote compass is currently being developed for the national elections in 2021, an alternative voting advice application that allows citizens to check whether their own priorities for five fundamental social goals align with those of the parties or MPs. Positions on specific issues, as assessed in the voting advice application, can and may well change if the framework conditions change; by contrast, goal priorities are likely to be more stable and indicate a political position.

Rüdiger von Nitzsch

In spring of this year, a book summarizing the methods of reflected decision-making was published: von Nitzsch, Rüdiger & Methling, Florian, Reflektiert Entscheiden – Kompetent mit Kopf und Bauch, Frankfurter Allgemeine Buch Verlag, 2021.
Vega is the brightest star in the northern sky. So it is not a coincidence that the young photovoltaic company in Tirana, Albania is called “Vega Solar”; it was founded around two and a half years ago by RWTH graduates Philipp Koronowski, who graduated in 1996, and Bruno Papaj, in 1993. It is now considered a model company in the Albanian economy and was even the subject of a report by TV broadcaster arte: “Albania’s Place in the Sun – A Solar Company Shines Through.”

Today, 13 employees with an average age of 27, as well as up to 50 technicians work for the photovoltaic service provider who complete projects throughout Albania. One is a “German expat” in Albania, the other is an Albanian national returning home. Bruno is from the city of Fier and came to Aachen to study Business Administration and Engineering: Electrical Power Engineering. He met Philipp in the first semester while doing “Higher Mathematics”. They completed their studies together and have been close friends ever since. Philipp was actually on his way to becoming a professional footballer at Fortuna Düsseldorf. But a serious knee injury made him rethink his plans. He ultimately decided to go to university. Bruno’s way to RWTH also has a sporty start. He won the Mathematical Olympiad in 2008 in Albania. “He is an absolute genius in maths and physics and deserved to study in Germany,” stresses Philipp. It was also not all that difficult for Bruno to decide to study in Germany. Germany and German products generally have a very good reputation in Albania, particularly German engineering. RWTH was his first choice.

During their studies, Bruno and Philipp dreamed of building electric cars. But they learned very quickly that it would require a lot of capital and effort to set up a promising company. The idea for the photovoltaic start-up came to them while on vacation in Albania. They saw that there were no photovoltaic systems there – unlike in North-Rhine Westphalia, for example. But, Albania has something NRW does not – an average of 300 days of sunshine a year. It is “blessed by nature” as Philipp says. After doing some research, they discovered that the price for electricity is very high in relation to the gross domestic product. What they also realized is that, there is

Sunny Prospects
Two Young RWTH Graduates Establish Photovoltaic Technology in Albania
no competition in Albania. Photovoltaic systems are very new to this small country in the Balkans. So Bruno and Philipp chose a good time to start up their business, as developing renewable energies is a very important goal for Albania as an EU candidate country. As if to confirm this, the TV report also showed a speech by Gjergji Simaku, Director for Renewables and Energy Efficiency at the Ministry for Energy and Infrastructure, visits the two start-up founders personally on a building site.

“There is almost no other way to generate a similar return on investment.”

the Director for Renewables and Energy Efficiency at the Ministry for Energy and Infrastructure, Gjergji Simaku, who praised the innovative work and expertise of the two young entrepreneurs. There is now legislation for the installation of solar panels and feeding electricity into public grids that investors can also benefit from if excess energy is produced. “There is almost no other way to generate a similar return on investment,” explains Philipp.

But the most important basis for deciding to establish the start-up was their knowledge and experiences from their studies at RWTH: “We feel like we were very well prepared. We often take a look at our course work, for example on marketing or internal organization, and think yes, that makes sense, that could be very useful. In practice, things become much clearer.” This is also the case for the technical components.

Starting the company meant that the center of Philipp’s life has moved to Tirana, Albania, where he was welcomed as a member of Bruno’s family. Family plays an important role in Albania, including at companies. For example, Bruno’s father helps as a foreman, while his sister helps with technical design.

For the technical side of their orders, Bruno and Philipp have now built up a network of subcontractors who can be hired depending on the size of the project. They have also started training employees themselves. “Young Albanians are very interested in learning new things, they are thirsty for knowledge and learn very
Today, Vega Solar has 13 employees with an average age of 27.

“Discipline is certainly something we gained from RWTH.”

Unlike the positive outlook for the start-up, the economic decline of the country under the communist Hoxha regime can still be felt, particularly in rural areas. There are barely any prospects for young people in Albania, and many have already left the country. It is not uncommon for Bruno and Philipp to be approached by young Albanians who want to leave the country to try their luck in Germany. But the young entrepreneurs also want to encourage them to stay with their dedication. The Albanian Government hopes that this example will result in other young, well-trained Albanians returning from abroad in order to build up the country.

Bruno and Philipp already have their eye on their next goals. For example, they are working on projects with battery storage technology and hybrid systems. Excess energy is stored in batteries and used later. They also have plans for electrical charging stations. “Soon, there will likely be electric cars in Albania, so charging stations will be required,” says Philipp. And generating renewable energy with wind turbines is also part of Vega Solar’s future plans.

So there is a lot of work to do for the young company. But Bruno, the maths genius, and Philipp, the former professional athlete, do not see this as a problem: “We are disciplined, we are motivated. Discipline is certainly something we gained from RWTH. The course was very difficult, you had to be very disciplined and well organized to be successful. We still maintain these traits, this “RWTH mentality” in Albania!”

Dietrich Hunold
As an active player in the “European Higher Education Area”, RWTH, along with six other technical universities in the ENHANCE network, is involved in the prestigious competition European Universities of the EU Commission. In addition to RWTH, the ENHANCE Group is comprised of the Technical University Berlin, Chalmers tekniska högskola (Sweden), Norges teknisk-naturvitenskapelige universitet NTNU Trondheim (Norway), Politechnika Warszawska (Poland), Politecnico di Milano (Italy), as well as Universitat Politècnica de València (Spain).

We have known long before the corona pandemic that the major social challenges facing us do not stop at national borders. The current crisis has shown more clearly than ever how important partnerships and coordinated action are and what exchanging and sharing innovative processes, ideas, and solutions can achieve. ENHANCE is an international network that seeks to tackle the big social challenges of our time between and across disciplines and develop innovative solutions. The aim is to foster a responsible social transition in which universities enable people to use science and technology for the benefit of society, transforming global challenges into opportunities.

In addition to 40 other university alliances supported by the EU Commission, ENHANCE is also pursuing the vision of a European University, a joint campus for Europe that promotes a common identity as an important part of European society, crosses national borders and strengthens innovations, inclusion, creativity, and responsibility. The name of the network, ENHANCE, is an acronym and stands for European Universities of Technology Alliance. The verb “to enhance” means to improve, upgrade, further develop; this describes the main goal of the Alliance: strengthening the cooperation among the universities in such a way that creates genuine added value, establishes an even wider range of education, mobility, and participation offers for more target groups, and increases the positive interaction between research and innovation, and the local communities.

A common vision for the future
Universities as a key player in society is a central approach of the ENHANCE Alliance. As large educational institutions, the seven members not only pass on knowledge and skills but also values, ways of thinking, and cultures of cooperation. All ENHANCE activities are based on the European values as they are formulated in the Treaty of Lisbon: Respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities. Using these values as a guide, the strengths of the seven partners are combined to further drive change in society. This strong vision is expressed in ENHANCE’s mission statement: We will drive responsible societal transformation by enhancing a strong alliance of European universities of technology, empowering people to develop and use science and technology responsibly and turn global challenges into opportunities.

ENHANCE considers equality and human rights for all citizens to be the foundation for European integration, the basis for all Union policies, and encompasses all areas. Education opportunities and exchange within the European University should be accessible to everyone, regardless of their economic background, particular needs, or family situations. Our ombudsman for “Gender Diversity and Equality” ensures that these factors are taken into account in all of our activities. A work package for this very important topic has been set up, for which RWTH is responsible.
Our Vice-Rector for International Affairs, Professor Ute Habel, considers the project to be an important step towards a common European Education Area in which cooperation, mobility, inclusion, and social equality are the main goals in its development. “ENHANCE will accelerate our development as an institution, as a network, and the development of the European Education Area as a whole towards more cooperation, mobility, inclusion, and social cohesion in Europe. We at RWTH are delighted to play an active role in the future model “Campus for Europe.”

ENHANCE incorporates the strengths and diversity of European research and teaching into new structures. The concept of the European University is eventually intended to be a model for high-quality university education in Europe and ultimately attract international researchers and lecturers from all over the world. A key part of unrestricted mobility is removing bureaucratic obstacles.

A European University will become an inter-university campus with curricula in which students, researchers, doctoral students, and employees can move almost seamlessly. Expertise, platforms, and resources will be combined in order to make curricula or modules flexible. This way, education can be customized; students can choose what, where, and when they study. A European University will also contribute to sustainable economic development of the region where it is located, as it establishes partnerships between students and companies, communities, and other stakeholders. In addition to the close cooperation between RWTH and the six partner universities, ENHANCE also focuses on exchanges with practice partners, including more than 30 associated partners from industry, the economy, civil society, and public administration.

Putting theory into practice
The initial three-year funding period will focus on three pilot topics based on UN goals for sustainable development: Digitalisation and Artificial Intelligence, Sustainable Cities and Communities, and Climate Action.

As part of the project, ENHANCE is laying the groundwork for unrestricted mobility within the network, setting up and expanding transdisciplinary research activities with stakeholders in society, as well as strengthening sustainable innovations and start-ups. For example, study offers are to be mapped to enable students to choose from the wide range of educational offers within the ENHANCE Alliance, with the guarantee that the credit points for them will be recognized. These instruments will first be tested with previously selected Bachelor and Master programs. Furthermore, new kinds of teaching and education formats are to be used to enable all matriculated students to benefit from the international ENHANCE offers. For example, they will be able to take part in online courses at the partner universities, work on projects virtually with other students, or take part in workshops. In a participative process, a showcase model for teaching will be developed so that students and lecturers can reach their full potential, regardless of their socioeconomic or cultural background.

Life-long learning not only plays an important role for ENHANCE but also on the global education market, including in the form of so-called micro-credentials. Micro-credentials are certificates of performance for small course units during a course of study and beyond. ENHANCE wants to develop formats in order to promote inner-Europen mobility and maximum flexibility on learning paths.

The EU project was planned some time before the corona pandemic. ENHANCE is now also looking at the question of how universities can use their role in society to tackle the challenges of the pandemic. How does the current crisis strengthen trends and changes within society, research and teaching? What opportunities are there? What challenges can be solved more easily at the European level? How will people deal with growing digitalization? Will universities become more virtual in future?

Thanks to the EU Initiative ENHANCE, the potential of strategic university partnerships has become the focus of attention on the global education market while enhancing the international profile and position of the universities.

Jenny Roseboom

https://enhanceuniversity.eu
We Promote Diversity!
Two Examples of Student Visions and Creativity

RWTH is so much more than research and teaching! Even though these are two key pillars of our university, it owes its diversity to the many student initiatives. Students conduct interdisciplinary and practical research, compete with their research projects at international competitions, or even have plans to launch a start-up. The proRWTH association has been fully supporting the ideas, visions, and creativity of these young talents for many decades – maybe you will become a part of it!

www.proRWTH.de

Contact at the proRWTH association:
Jeannette Schwerdt
Tel.: +49 241 8093000
E-mail: j.schwerdt@proRWTH.de

Space for ideas and innovations: Students work together on their projects in the Collective Incubator.

For Students by Students With a Chance of International Success

The Collective Incubator team is a group of students from wide areas of research who work side by side to achieve the common vision of the next big thing. The team of currently almost 40 students is committed to offering young start-ups, student initiatives, or even just good ideas the space to develop. The team supports these projects by providing the necessary advice on dealing with bureaucracy and on legal and financial matters. The growing network, which includes a increasing number of large companies, also offers valuable contacts.

Space and more: A community that sees itself as a collective

The heart of the Collective Incubator is a co-working space to carry out promising projects. This room is to be made available to teams with no obstacles and provide a space for them to make their ideas a
realities. Therefore, it can be accessed free of charge 24 hours a day, seven days a week. With these offers, the community sees itself as just that – a community that supports each other and works closely together. This is exactly how innovations develop.

When it became clear in 2020 that funds from the support program Exzellenz Start-up Centers.NRW of millions of Euros could be used to create a huge co-working space with a workshop hall, the team took the initiative and set up a temporary Collective Incubator Pop-up with offices, conference rooms, and event and community spaces at Aachen Main Station in order to first try out the concept over a space of around 700 square meters. It was a huge success; within the first year, the community grew to over 100 student projects, initiatives, and start-ups.

These include, for example, the project Tachyon Hyperloop, which was started in 2020 by students from the RWTH Business School with the support of the Collective Incubator. The mobility concept, which was initiated by Tesla boss Elon Musk in a competition, aims to offer travel at almost supersonic speed by combining maglev technology and vacuum tubes. The successes of the ambitious team include winning over a few large companies who support the association and building their own test track for trials with the high-speed vehicles.

Enthusiasm for technology and start-ups
The Collective Incubator regularly organizes events on the topics of technology, innovation, and start-ups. The “TechTalks” feature pioneers and experts and explain how new technologies work and how they can be used. These include drones and medical technology, to fields of application for artificial intelligence. The Collective Incubator, together with RWTH Innovation GmbH, organizes one of the largest congresses on innovation and entrepreneurship in Germany, the international innovation congress ATEC X. In 2020, speakers included top athlete and founder Jan Frodeno, Frank Thelen and NRW Minister for Economic Affairs Prof. Dr. Andreas Pinkwart. Over 2,200 people attended the digital event.

Full circle, from the German Gründerzeit to the industrial post-modern period
The next step will be taken at the end of this year. On the industrial site of the former electronics company Gabe, Lahrmeier & Co. KG in northern Aachen, the Collective Incubator will move into an old 4,000-square-meter factory hall from the Gründerzeit from the 1890s. The site will be used to transform the area around the century-old hall into an innovation campus, the century campus. Workshops for various areas of research, office and conference rooms, as well as a film and sound studio will be set up.

Would you like to find out more or join our team?
Your contact:
Kristin Röhling, Member of the Board
E-mail: info@collective-incubator.de

Hyperloop – building a sustainable future for transportation
We are Tachyon Hyperloop, a technical initiative by Team Tachyon e.V. engaging various engineering disciplines deeply interested in the concept of Hyperloop. Our vision is to build a sustainable future for transportation through the implementation and dissemination of Hyperloop.

“Tachyon” is the scientific name given to a particle that travels faster than light, and our motto of “semper accelerans” is Latin for “always accelerating”. Hyperloop is a faster alternative to existing transnational rail and air travel and would be best applied to connect major cities to help integrate commercial and labor markets, or airports to fully utilize national airport capacity. Hyperloop’s low-energy potential could help alleviate existing and growing travel demand by helping to reduce congestion and offering a low-carbon alternative to existing transport modes. With speeds 1.5x faster than the commercial airliner, it will likely change both the face of the transport industry, as well as socio-political boundaries and structures as we know them.

Hyperloop: Status Quo
Essentially, Hyperloop is ground-based transportation that uses magnetically levitated “Pods” in tubes with near-vacuum conditions to eliminate friction and propel passenger and cargo at speeds faster than an airplane (>1000km/h). It gained its recent popularity when Elon Musk first mentioned it as the “5th Mode of Transportation” in 2012, calling it “Hyperloop”. Since then, there has been heightened research and interest in Hyperloop and several organizations have formed to
advance the technology. Estimates say the first Hyperloop system should be operational by 2025, feasibility studies in locations all over the world are under way.

There are still several challenges to a fully realized Hyperloop system including engineering obstacles, safety, and ergonomics, but it is a fair assumption that the reality of Hyperloop transit is not far. However, there is still a huge void in our local (Aachen) and regional (NRW, Euregio) research on Hyperloop. We wish to represent RWTH Aachen University, the city of Aachen and all our partners and supporters in strongly challenging the status quo while bridging the research gap in making Hyperloop commercially feasible.

**Tachyon Hyperloop: Team and Progress**

The idea for Tachyon Hyperloop full-scale operations commenced in March 2020 with legal registration as “Team Tachyon e.V.” in August 2020 with now 38 members from diverse nationalities in both management and engineering studies. We also have a Board of Advisors consisting of alumni and professors. We have a workshop and our “Schirmherr” at the Institute of General Mechanics (IAM). The team is divided into 7 working groups as follows: Mechanical Systems (MS); Propulsion Systems (PS); Electronic Systems (ES); Levitation Systems (LS); Innovations and Research (IR); Systems Integration (SI) and Business and Marketing (BM).

We partnered with Collective Incubator e.V. to provide us with a co-working space and general guidance. We have many supporters, including Siemens AG, EVS GmbH, and proRWTH. Although we still have a long way to go in terms of funding for our 1st prototype, these partnerships have helped us establish a very good base and credibility.

We currently have four ongoing projects:

1. “Proton”: 1st prototype scheduled for the end of 2021, designed to reach 300km/h
2. “MiniPod 1000”: Propulsion research project focusing on motor and sensors
3. “MiniPod 3000”: Levitation research project using a Halbach array
4. “MiniPod 4000”: 10m vacuum tube with a small levitating Pod using LIM

Developing a complete Hyperloop Pod by 2023 with levitation is probably the biggest challenge. We also plan to participate in all student competitions where possible, such as the European Hyperloop Week in Valencia, Spain.

› Aanand Gajjar

Building the future! You are welcome to join or support our idea!

contact: contact@tachyonhyperloop.de

www.tachyonhyperloop.de
Life in Aachen

The Search for a Unique Experience

The New MERIAN Scout Shows the Innovative, Lively and Euregional Side of Aachen
Be honest: Who walks through Aachen with eyes wide open and can take in all of the diversity the city has to offer? The Jahreszeiten Verlag has done just that for us. Its new series MERIAN Scout now includes an Aachen Scout, following editions for prominent major cities such as Berlin, Hamburg, and Leipzig. Friendly insiders take readers through “their” area, point out new spots and give shopping tips. Even born-and-bred Aachen residents can find out new things about their city. “Aachen is a young, welcoming, urban city. The new MERIAN Scout features beautiful images and many tips to highlight this. It therefore fit perfectly with the optimistic mood that can currently be felt in Aachen,” enthuses Mayor Sibylle Keupen.

Joint location marketing
The magazine is a good addition to traditional travel guides about Aachen as well as a useful tool for city marketing. The fact that it is available all over Germany helps Aachen business and universities to attract students and specialists to Aachen.

This would not have been possible without partners: “A huge thanks goes out to the aachen tourist service, RWTH, Aachen University of Applied Sciences, the City Region, shopping in Aachen, and many others,” says Dr. Jutta Bacher, Head of the Department of Communication and City Marketing of Aachen, who had no trouble convincing the publisher to create a magazine about Aachen. She and her team advised the MERIAN editorial team and provided them with tips. “Everyone’s enthusiasm for the project was great! But without the quick and uncomplicated support from our reliable partners, this new Aachen edition would not have been possible. It also showed how well and easy collaborating on city marketing for Aachen can work."

Innovative, lively, euregional
The universities with all their institutes spread around the city, as well as research institutions, start-ups, and brilliant minds also make Aachen vibrant as the magazine shows. It is clear to RWTH Rector Dr. Ulrich Rüdiger: “RWTH is just as much a part of Aachen as Aachen is of RWTH. The University with its students and staff make Aachen an innovative city full of small and large opportunities for experiences.”

This year, RWTH is also celebrating its 150th+1 birthday – which was postponed for a year due to the pandemic. The special anniversary editions are one of the many shopping tips in the magazine. And in 2021, there is another scientific anniver-

Further information
The MERIAN Scout Aachen from the Jahreszeiten Verlag in Hamburg is available for purchase now everywhere where magazines are sold. It costs 6 Euros, with 50,000 copies available, and includes 116 richly illustrated pages with 200 insider tips in clear categories.

The MERIAN Scout Aachen is also available from the RWTH Shop: https://shop.rwth-aachen.de

Jutta Bacher
Alumni Service & Projects

Registration
Have you already registered as an alumna/alumnus in our network? If not, register free of charge online at www.rwth-aachen.de/alumni-portal

Information & Communication
- Alumni Magazine “keep in touch”; twice a year in print as well as digitally as a PDF.
- Email newsletter with current information and interesting facts about Aachen and the University.
- Alumni meeting in Germany and abroad.
- Contact with fellow students and contacts from science & industry
- Social Media.
  - RWTH Aachen University
  - RWTH Aachen University Alumni

Benefits
- “life long” email address.
- Further education offers at the RWTH International Academy and the Aachen Entrepreneurship Center.

“Researcher Alumni” Project
We want to attract international visiting researchers as ambassadors to the University as well as multipliers with special initiatives and involve them in our network activities.

Detailed Information:
www.rwth-aachen.de/alumni

Legal Notice

Publisher on Behalf of the Rector:
Staff Unit: Relationship Management
52056 Aachen, Germany
Telephone +49 241 80-95585
Fax +49 241 80-692392
Email: alumni@rwth-aachen.de
http://www.rwth-aachen.de/alumni

Managing Editor:
Dietrich Hunold (dih)

Editorial Assistance:
- Dr. Jutta Bacher, Communication and City Marketing for the City of Aachen
- David Beumers, Team Collective Incubator e. V.
- Aanand Gajjar, Team Tachyon Hyperloop e. V.
- Lennart Hoffman, Team Collective Incubator e. V.
- Dr. Felix Kampel, Dept. 4.0 Research
- Thorsten Karbach, Dept. 3.0 Press and Communication
- Linh Le, INCAS e. V.
- Dr. David Lerch, Corporate Communication Bayer AG
- Jenny Roseboom, Dept. 2.0 International Office
- Thomas Castro Schmidt, INCAS e. V.
- Jeannette Schwerdt, proRWTH – Freunde und Förderer e. V.
- Prof. Dr. Rüdiger von Nitzsch, Teaching and Research Department Decision Theory and Financial Services
- Dr.-Ing. Jan Werth

Responsible:
Angela Poth, Head of the Staff Unit: Relationship Management

Layout:
LÜNENSCHLOSS Kommunikationsdesign, Aachen

Advertiseing management:
Medienhaus Aachen GmbH
Dresdener Str. 3
52068 Aachen, Germany
Managing Director: Andreas Müller

Advertisements:
Jürgen Carduck / Head of Advertising Market
(responsible for advertising within the meaning of Sec. 8 (2) of the State Press Act of NRW)
Elke Brooren / National Sales Management / Key Accounts / Advertising Market
Telephone + 49 241 5101-270
Email: elke.brooren@medienhausaachen.de

Translation:
lengoo GmbH, Berlin

Printing:
Druckerei Mainz GmbH

Number of Copies:
11,000

Frequency:
Twice a year. All rights reserved. Reprints, including excerpts thereof, requires the consent of the editorial team.

Title Image:
Dr.-Ing. Christina Reuter
Photo: Elisabeth Blass Fotografie

ISSN 1864-5828
Impulse für den Wandel

Ihr Wissen, Ihre Erfahrung und eine gesunde Intuition haben Sie bereits weit gebracht – mit uns bauen Sie Ihren Vorsprung noch weiter aus!

Ob eine Woche oder sechs Semester, Universitätszertifikat oder Master-Abschluss, berufsbegleitend oder Vollzeit – an der RWTH Business School finden Sie die Weiterbildung, die zu Ihnen passt.

Kontaktieren Sie uns gerne!
T. +49 241 80-20010
M. info@business-school.rwth-aachen.de
W. www.business-school.rwth-aachen.de